



# UNITED STATES PATENT AND TRADEMARK OFFICE

*Handwritten signature*

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,784	07/21/2003	Richard Foote	RSTN-088	6093
30139 7590 04/04/2007 WILSON & HAM 2530 BERRYESSA ROAD PMB: 348 SAN JOSE, CA 95132			EXAMINER CHO, HONG SOL	
			ART UNIT 2616	PAPER NUMBER

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/04/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

**Application No.**

10/623,784

**Applicant(s)**

FOOTE ET AL.

**Examiner**

Hong Cho

**Art Unit**

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____.                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20030721</u> .  | 6) <input type="checkbox"/> Other: ____.                          |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 5-15 and 18-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hama (US 20040202171) in view of Ishizaki et al (US 7099912), hereinafter referred to as Ishizaki.

Re claims 1, 14, 23 and 32, Hama discloses establishing virtual private network (*establishing a customer-specific virtual private local area network (VPL) through a multiprotocol label switched (MPLS) domain* in claims 23 and 32, paragraph [0002], lines 18-21). Hama discloses a provider edge device (PE) (figure 6, element 213) receiving traffic from another PE (figure 6, element 212) via a MPLS network (*receiving traffic from a customer at a provider edge device (PE), wherein said PE connects to other PEs via a tunnel-capable network*). Hama discloses a PE distributing traffic to either Internet (*first service, non-VPL service* in claims 23 and 32) or within corporate enterprise (*default service, VPL service* in claim 23, *remaining traffic* in claim 32) based on virtual

local area network (VLAN) identifiers (IDs) (*associating traffic with either the first service or with a default service in response to the classification*, traffic; *forwarding non-VPL traffic outside of said customer-specific VPL*; and *forwarding the remaining traffic within said customer-specific VPL* in claim 32, paragraph [0093]), but fails to disclose explicitly identifying a set of virtual local area network (VLAN) identifiers (IDs) for use with a first service and associating traffic based on explicitly identified set of VLAN IDs. Ishizaki discloses allowing VID-A and VID-B to access Internet (*explicitly identifying a set of virtual local area network (VLAN) identifiers (IDs) for use with a first service*, figure 5) and checking VLAN ID to determine how to distribute the traffic (*associating traffic with either the first service or with a default service in response to the classification*, column 8, lines 28-36). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the PE of Hama to implement the function of associating traffic with either the first service or with a default service in response to the classification, as suggested by Ishizaki (column 8, lines 32-33), so that Internet access would be managed by VLAN ID.

Re claims 2 and 15, Hama discloses a packet containing VLAN ID value (paragraph [0093], lines 1-2).

Re claims 5 and 18, Hama discloses PEs in a MPLS network (figure 6, element 200).

Re claims 6, 7, 9, 19, 20 and 30, Hama discloses encapsulating a packet with a VPN label (*a tunnel label*) and a VLAN ID (*a virtual circuit label*) (paragraph [0093]).

Re claim 8, Hama discloses a PE distributing traffic to corporate enterprise (*VPL service*, paragraph [0093]).

Re claim 10, Hama discloses all of the limitations of the base claim, but fails to disclose assigning a range of VLAN IDs to a customer and explicitly identifying a set of VLAN IDs from the assigned range of VLAN IDs. Ishizaki discloses allowing VID-A and VID-B to access Internet (*explicitly identifying a set of VLAN ID*, figure 5; column 8, lines 28-36). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the PE of Hama to implement the function of explicitly identifying a set of VLAN ID, so that Internet access would be managed by VLAN ID.

Re claims 11 and 21, Hama discloses finding VPN identifier corresponding to the VID contained in the tag (*identifying a layer 2 (L2) forwarding equivalency class (FEC) that is related to the first service and associating the traffic with the default service includes identifying an L2 FEC class that is related to the default service*, paragraph [0087], lines 2-4).

Re claims 12 and 24, Hama discloses using IEEE 802.1q VLAN IDs for constructing VPN, but fails to disclose identifying IEEE 802.1q VLAN for use with a first service (non-VPL traffic in claim 24). Ishizaki discloses allowing VID-A and VID-B to access Internet (*explicitly identifying a set of virtual local area network (VLAN) identifiers (IDs) for use with a first service*, figure 5). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the PE of Hama to implement the function of associating traffic with either the first service or with

a default service in response to the classification, as suggested by Ishizaki (column 8, lines 32-33), so that Internet access would be managed by VLAN ID.

Re claims 13 and 22, Hama discloses a PE distributing traffic to either Internet (*non-VPL service*) or within corporate enterprise (*VPL service*) based on VLAN IDs (paragraph [0093]).

Re claim 25, Hama and Ishizaki disclose all of the limitations of the base claim, but fail to disclose determining whether the traffic is non-VPL traffic before determining whether the traffic is VPL traffic. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Hama and Ishizaki to process non-VPL traffic before VPL traffic so that non-VPL traffic would be processed with high priority.

Re claims 26 and 27, Hama discloses all of the limitations of the base claim, but fails to disclose identifying a set of VLAN IDs for use with a first service and identifying traffic as VPL traffic if VLAN ID is not identified with a set of VLAN IDs. Ishizaki discloses allowing VID-A and VID-B to access Internet (*identifying a set of VLAN IDs for use with a first service*, figure 5) and associating VID-C with VPL traffic (*associating traffic with VPL traffic*, column 8, lines 28-36). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the PE of Hama to implement the function of associating traffic with either the first service or with a default service in response to the classification, as suggested by Ishizaki (column 8, lines 32-33), so that Internet access would be managed by VLAN ID.

Re claims 28 and 29, Hama discloses finding VPN identifier corresponding to the VID contained in the tag (*configuring L2 FEC that maps the non-VPL traffic to a label switching path (LSP) that does not support the customer-specific VPL and maps the VPL traffic to a LSP that supports the customer-specific VPL service*, paragraph [0015], lines 10-16).

Re claim 31, Hama discloses VLAN IDs having per-port significance (figure 7).

Claims 3 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hama in view of Ishizaki and further in view of Bhatia (US 6990106).

Re claims 3 and 16, Hama and Ishizaki disclose all of the limitations of the base claim, but fail to disclose classifying traffic based on incoming port of the traffic. Bhatia discloses classifying the packet based on port (column 3, lines 63-65). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Hama and Ishizaki to classify a packet based on incoming port so that a packet would be classified at early stage for the benefit of rapid processing.

Claims 4 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hama in view of Ishizaki and further in view of Wakayama et al (US 7079544), hereinafter referred to as Wakayama.

Re claims 4 and 17, Hama and Ishizaki disclose all of the limitations of the base claim, but fail to disclose classifying traffic based on incoming port of the traffic.

Wakayama discloses classifying the packet based on port and VLAN ID (column 6, lines



38-41). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Hama and Ishizaki to classify a packet based on incoming port and VLAN ID so that a packet would be classified at early stage for the benefit of rapid processing.

### *Conclusion*

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hong Cho whose telephone number is 571-272-3087. The examiner can normally be reached on Mon-Fri during 7 am to 4 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Application/Control Number: 10/623,784  
Art Unit: 2616

Page 8

hc  
Hong Cho  
Patent Examiner  
3/30/07

Seema S. Rao  
SEEMA S. RAO 4/2/07  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600